

Sub E11
D2
Claim 69. (Twice Amended) A system for percutaneous treatment of a patient's heart, comprising:

- a catheter, the catheter having a proximal end and a distal end;
- an active portion at the distal end of the catheter for sensing electrical signals generated on the heart and for applying laser energy operable to ablate a portion of the heart;
- a position sensor responsive to magnetic fields for generating signals for determining position and orientation coordinates of the catheter distal end; and
- a map showing the sensed electrical signals generated by the heart.

Sub E11
D3
Claim 83. (Twice Amended) A method of treating a patient's heart comprising the steps of:

- (a) percutaneously inserting a catheter into a heart of a patient, the catheter having a proximal end and a distal end, an active portion at the distal end of the catheter for sensing electrical signals generated on the heart and for applying laser energy, and a position sensor responsive to magnetic fields for generating location signals;
- (b) generating magnetic fields;
- (c) using the position sensor to generate location signals based on the generated magnetic fields;
- (d) sensing the position of the catheter distal end based on the location signals generated by the position sensor for determining position and orientation coordinates of the catheter distal end;
- (e) using the position sensor to reference the catheter distal end based on the position and orientation coordinates;
- (f) sensing electrical signals generated by the heart;
- (g) mapping the electrical activity of the heart using the sensed electrical signals;
- (h) positioning the catheter such that its distal end is adjacent tissue of the heart to be treated based on the position and orientation coordinates; and
- (i) applying laser energy from the active portion to the patient's heart tissue.